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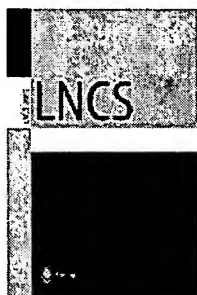
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**Instrumentation Database for Performance
Analysis of Parallel Scientific Applications**

Book Series	Lecture Notes in Computer Science
Publisher	Springer Berlin / Heidelberg
ISSN	0302-9743 (Print) 1611-3349 (Online)
Volume	Volume 1511/1998
Book	Languages, Compilers, and Run-Time Systems for Scalable Computers: 4th International Workshop, LCR'98, Pittsburgh, PA, USA, May 1998. Selected Papers
Copyright	1998
Page	229
Subject Collection	Computer Science
SpringerLink Date	Thursday, February 19, 2004

Authors

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¹Rensselaer Polytechnic Institute Department of Computer Science Troy, NY
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Abstract

Parallel codes, especially scientific applications, have increased the need for performance analysis tools. In this paper we present an approach that addresses some of the difficulties inherent to the analysis of parallel codes. To this end we examine the three components that comprise performance analysis: instrumentation, visualization, and analysis. The essence of our approach is to use a database to capture instrumentation data. We discuss how this approach influences the design of performance analysis components. We further motivate our approach with an example using a sparse matrix vector product code. We conclude by discussing some of the key implementation issues and outlining future plans.

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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	JP11259350	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 12:54
L2	2	JP ADJ "11259350"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 13:17
L3	0	deviation near2 program adj statements	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 13:17
L4	5	deviation same program adj statements	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 13:18
L5	1884	deviat\$ same program adj statements	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 13:18
L6	9	deviat\$ same program adj statements	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 13:19
L7	83	database same program adj statements	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 13:20
S1	65	"707".clas. and deadlock same code	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/08 12:53

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S2	1	database near2 statement same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:39
S3	1	database near2 code same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:39
S4	158	database near5 deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:39
S5	31	database near5 deadlock.ab.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:42
S6	3	"717".clas. and deadlock.ti.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:43
S7	18	"717".clas. and deadlock same database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:46
S8	65	deadlock same database.ab.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:53
S9	21	"707".clas. and deadlock.ti.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 19:57

EAST Search History

S10	12	detecting near2 deadlocks same database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:00
S11	7446	"718".clas. detecting near2 deadlocks same database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:00
S12	1	"718".clas. and detecting near2 deadlocks same database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:00
S13	38	"718".clas. and detecting near2 deadlocks	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:15
S14	0	database adj transaction same monitoring same deviation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:16
S15	3	database adj transaction same deviation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:16
S16	4033	database same deviation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:16
S17	381	database same deviation.ab.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:17

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S18	14	database same deviation.ti.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:18
S19	5	database adj statement same deviat\$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:19
S20	40	database same statement same deviat\$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:38
S21	70	database same statement same correlation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:42
S22	62	"707".clas. and statement near2 mapping	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:42
S23	16	"707".clas. and statement near2 correlation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:53
S24	8	"707".clas. and workflow same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:54
S25	5	database same workflow same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:56

EAST Search History

S26	4	database.ab. and workflow same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:56
S27	2	database near2 actions same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:57
S28	3	database near5 actions same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:57
S29	16	database near5 steps same deadlock	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/01/07 20:57



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[W Waddington](#)

[J Klein](#)

[J Cohen](#)

[D Leary](#)

[J Gautam](#)

Development of a high performance, memory based, relational database system using Ada

RS Birch, A Bolwell, JJ Maloney - Ada Applications and Environments, 1988., Third ..., 1988
- [ieeexplore.ieee.org](#)

Page 1 TAB of Queensland Albion, Queensland. 4010. Australia. 2. 2.1
CH2470-3/8810000/0039\$01 .00 © 1988 IEEE 39 DEVELOPMENT OF ...

[Related Articles](#) - [Web Search](#)

Method and apparatus for parallelizing operations that create a table - all 3 versions »

J Cohen, WH Waddington, D Leary, J Klein - US Patent 5,870,743, 1999 - Google Patents
... **Database statements** that require write operations typi- ... if a transaction that made changes to the database cannot be completed due to **deadlock**, the transaction ...

[Cited by 7](#) - [Related Articles](#) - [Web Search](#)

Method and apparatus for parallelizing operations that insert data into an existing data container - all 3 versions »

J Gautam, WH Waddington, LL Tan, G Hallmark, J ... - US Patent 5,956,704, 1999 - Google Patents

... **Database statements** that require write operations typi-cally include processing steps that ... the database cannot be completed due to **deadlock**, the transaction ...

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[Partial-Order Methods for Temporal Verffication - all 7 versions »](#)

P Wolper, P Godefroid - CONCUR'93: 4th International Conference on Concurrency ..., 1993 - books.google.com

... we need to make precise the notions of program step and independent **program steps**. ... we only consider the problem of detecting terminating (or **deadlock**) states. ...

[Cited by 102](#) - [Related Articles](#) - [Web Search](#)

[A Proof System for Communicating Sequential Processes - all 2 versions »](#)

KR Apt - ACM Transactions on Programming Languages and Systems (..., 1980 - portal.acm.org

... An axiomatic proof system is presented for proving partial correctness and absence of **deadlock** (and failure) of communicating sequential processes. ...

[Cited by 198](#) - [Related Articles](#) - [Web Search](#) - [Library Search](#)

[Temporal logic-based deadlock analysis for Ada - all 6 versions »](#)

GM Karam, RJA Buhr - Software Engineering, IEEE Transactions on, 1991 - ieeeexplore.ieee.org

... 10, OCTOBER 1991 1109 0098-5589191501.00 © 1991 IEEE Temporal Logic-Based **Deadlock**

Analysis For Ada Gerald M. Karam, Member, IEEE, and Raymond J. A. Buhr ...

[Cited by 9](#) - [Related Articles](#) - [Web Search](#)

[Parallel logic simulation of VLSI systems - all 11 versions »](#)

RD Chamberlain - Proceedings of the 32nd ACM/IEEE conference on Design ..., 1995 - portal.acm.org

... accelerate the simulation loop by executing individual **program steps** on different ... waiting rule) can lead to blocking and even **deadlock**; therefore, techniques ...

[Cited by 30](#) - [Related Articles](#) - [Web Search](#)

[Decidability Questions for Fairness in Petri nets - all 3 versions »](#)

H Carstensen - STACS, 1987 - Springer

... The places outside of the dashed boxes will be used for all transformations of **program steps**. ... the net in figure 1 a firing of t would cause a **deadlock** of the ...

[Cited by 6](#) - [Related Articles](#) - [Web Search](#)

[A Perspective on Parallel Program Design - all 2 versions »](#)

J Misra - Research Directions in High-Level Parallel Programming ..., 1992 - books.google.com

... **program steps**, ensures provides a mechanism to capture (a weak form of ... Everything else—process, message, communication protocol, **deadlock**, etc.—has been ...

[Cited by 1](#) - [Related Articles](#) - [Web Search](#)

[Apparatus and method for achieving reduced overhead mutual-exclusion and maintaining coherency in a ... - all 6 versions »](#)

JD Slingwine, PE McKenney - US Patent 5,727,209, 1998 - Google Patents

... Contention: If processor 16A competes with processor procedures, checks, locks, **program steps**, or complexity to ^ ... **deadlock** as conventional mechanisms. ...
[Cited by 67](#) - [Related Articles](#) - [Web Search](#)

[\[PS\] Untangling the Threads Reduction for a Concurrent Object-based Programming Model](#) - [all 4 versions](#) »

WE Adams - 2000 - cs.utexas.edu

... 98 3.4 **Program steps** 126 4.3 **Deadlock**

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[Executing Java threads in parallel in a distributed-memory environment](#) - [all 3 versions](#) »

MW MacBeth, KA McGuigan, PJ Hatcher - Proceedings of the 1998 conference of the Centre for ..., 1998 - portal.acm.org

... calls. If it did, the service thread could block and prevent any further events from being handled, which could lead to **deadlock**. ...

[Cited by 42](#) - [Related Articles](#) - [Web Search](#)

[Designing massively parallel algorithms with Parallaxis](#)

T Brauni - Computer Software and Applications Conference, 1991. COMPSAC ..., 1991 - ieeexplore.ieee.org

... the basic control flow of a SIMD program is sequential (but on vector data, data-par- allel), programming is easier, and no timing or **deadlock** problems occur ...

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[O Wolfson](#)

[A Swami](#)

[H Young](#)

[T Saulpaugh](#)

[B Bruffey](#)

[The overhead of locking \(and commit\) protocols in distributed databases - all 3 versions »](#)

O Wolfson - ACM Transactions on **Database** Systems (TODS), 1987 - portal.acm.org
... structures, and the overhead of **deadlock**-free 2PL ... a transaction represents the execution of **program steps**. ... A transaction leaves a consistent **database**, if it ...
[Cited by 6](#) - [Related Articles](#) - [Web Search](#)

[\[PS\] Untangling the Threads Reduction for a Concurrent Object-based Programming Model - all 4 versions »](#)

WE Adams - 2000 - cs.utexas.edu

... 98 3.4 **Program steps** 126 4.3 **Deadlock**

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[Method for external sorting in shared-nothing parallel architectures - all 3 versions »](#)

AN Swami, HC Young - US Patent 5,845,113, 1998 - Google Patents

... al., "A Low Communication Sort Algorithm for a Parallel **Database** Machine", Proceed ...
nism to avoid intra-transaction **self-deadlock**, which adds 5 numberofphysical ...

[Cited by 9](#) - [Related Articles](#) - [Web Search](#)

[Apparatus and method for parallel computation - all 3 versions »](#)

N Kalantery - US Patent 5,832,272, 1998 - Google Patents

... essence, for example large **database** 10 searching ... Organisation of **deadlock**-free communication and synchronisation ... serial label of the **program steps** from which ...

[Cited by 15](#) - [Related Articles](#) - [Web Search](#)

[\[BOOK\] Fast Parallel Algorithms for Sorting and Median Finding](#)

T Dachraoui - 1998 - collectionscanada.ca

Page 1. FAST PARALLEL ALGORITHMS FOR SORTING AND MEDIAN FINDIKG TAOUIK DACHRAOUI A THESIS IPu' THE DEPARTMEXT OF COMPUTER SCIEKCE ...

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[\[PDF\] Message Flow Analysis - all 2 versions »](#)

OM Nierstrasz - 1984 - iam.unibe.ch

... 5.2.4. **Deadlock**

[Cited by 4](#) - [Related Articles](#) - [View as HTML](#) - [Web Search](#) - [Library Search](#)

[\[BOOK\] Interpretation and Instruction Path Coprocessing](#)

JM Campenhout, EH Debaere - 1990 - Mit Press

[Related Articles](#) - [Web Search](#)

Object oriented message passing system and method - all 3 versions »

TE Saulpaugh, BM Bruffey, RT Williams - US Patent 5,590,334, 1996 - Google Patents

... "Versions and Change Notification in an Object-Oriented **Database** System," 12 Jun. ...

"Object exchange Service for an Object-O -riented **Database** System," 6 Feb. ...

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[CITATION] BIOTECH NOLOGY Study ofToxicological Mechanism of
Moniliformin

E TspA - China Report: Science and Technology, 1979 - National Technical Information
Service

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[J Newman](#)

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[H Sneed](#)

[Apparatus and method for message queuing in a database system - all 3 versions »](#)

S Chandra, D Gawlick, S Jain, H Rizvi, P Shah, A ... - US Patent 6,058,389, 2000 - Google Patents

... 3 is a block diagram of a **database** system configured for use with the invention; FIGS. 4A-1 and 4A-2 are flow diagrams of a Sequence **Deviation** process; FIG. ...

Cited by 39 - [Related Articles](#) - [Web Search](#)

[... and apparatus for iteratively extending the results obtained from an initial query in a database - all 3 versions »](#)

H BenHadda, JF Marcotorchino, D Otthoffer - US Patent 6,366,904, 2002 - Google Patents

... 28 contains the names of all the variables in the **database**, and the ... the qualitative type (top right and bottom left boxes), standard **deviation** index computing ...

Cited by 2 - [Related Articles](#) - [Web Search](#)

[A database program to archive and analyze current weather data](#)

SH Parkin, JP Refling - Geoscience and Remote Sensing Symposium, 1996. IGARSS'96. ..., 1996 - [ieeexplore.ieee.org](#)

... SF0 were captured until this **deviation** in format ... to perform the various **program steps** repetitively on an unattended basis, Finally, the **database** portion of ...

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[Planning the reengineering of legacy systems - all 4 versions »](#)

HM Sneed - Software, IEEE, 1995 - [ieeexplore.ieee.org](#)

... Other tools, such as **database**-schema, map, and report-format auditors ... individual components of an application, adjusted by the standard **deviation**, becomes the ...

Cited by 109 - [Related Articles](#) - [Web Search](#)

[Method and apparatus for facilitating recovery of patients in deep coma - all 2 versions »](#)

MS John - US Patent 5,611,350, 1997 - Google Patents

... state, or derived from a **database** having a ... Those **program steps** that produce an improvement, as measured ... An overall multivariate measure of **deviation**, such as ...

Cited by 10 - [Related Articles](#) - [Web Search](#)

[\[PS\] A unifying framework for Adaptation in Case-Based Reasoning - all 5 versions »](#)

A Mille, B Fuchs, O Herbeaux - Workshop on Adaptation in Case-Based Reasoning, ECAI-96, ..., 1996 - [kluedo.ub.uni-kl.de](#)

... Each adaptation-item of the adaptation-case is presented with the **deviation** to reduce and the method ... Knowledge is managed through a **database**. ... (**program steps**) ...

Cited by 7 - [Related Articles](#) - [View as HTML](#) - [Web Search](#)

[A Retrospective Study of Spontaneous Generalization in Speech-Delayed](#)

Children - all 2 versions »

LD Shriberg, J Kwiatkowski - Language, Speech, and Hearing Services in Schools, 1987 - ASHA

... was unacquainted with both the **database** and the ... included simultaneous practice at several **program steps** during the ... 72 months, with a standard **deviation** of 20 ...

[Cited by 4](#) - [Related Articles](#) - [Web Search](#)

The Speech Disorders Classification System (SDCS) Extensions and Lifespan Reference Data - all 4 versions »

LD Shriberg, D Austin, BA Lewis, JL McSweeny, DL ... - Journal of Speech, Language and Hearing Research, 1997 - ASHA

... A pro- vides a technical review of **program steps**. ... tion assembled from these **database** samples be viewed ... statistics (mean, stan- dard **deviation**) when describing ...

[Cited by 54](#) - [Related Articles](#) - [Web Search](#)

Device for implementing an interrupt distribution in a multi-computer system - all 3 versions »

M Gronemeyer - US Patent 5,382,950, 1995 - Google Patents

... not failed, when these computers detect the **deviation** ... continue to work on matching **program steps** without ... disconnected, because the **database** of the computer ...

[Cited by 4](#) - [Related Articles](#) - [Web Search](#)

System for generating worksheet files for electronic spreadsheets - all 3 versions »

SJ Dubnoff - US Patent 5,033,009, 1991 - Google Patents

... be stored in the format of files produced by a **database** 15 after the ... 8 a count (*CNT), minimum (*MIN), maximum (*MAX), standard **deviation** (*STD), and variance ...

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Comparison of application protocols

R Neumann - 2003 - freepatentsonline.com

... The percent **deviation** can also be presented. ... [0044] The programs 12 access the **database**

8 by ... Once all **program steps** have been processed, the programs 12 are ...

[Cached](#) - [Web Search](#)

Method and means for extracting fixed-pitch characters on noisy images with complex background prior ... - all 3 versions »

RA Lorie, J Mao, KM Mohiuddin - US Patent 5,915,039, 1999 - Google Patents

... This is according to whether the standard **deviation** of the local threshold ... or steps were implemented in several software modules plus a knowledge 45 **database**. ...

[Cited by 5](#) - [Related Articles](#) - [Web Search](#)

Conflict detection and resolution between moving objects - all 3 versions »

A Inselberg - US Patent 5,058,024, 1991 - Google Patents

... r ji flow chart showing the **program steps** in implementing ... depending upon the degree of **deviation** from a ... indicated, obtain from a suitable **database** an avoidance ...

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The Effects of Using a Nonprocedural Computer Language on Programmer Productivity

EC Harel, ER McLean - MIS Quarterly, 1985 - JSTOR

... are appropriate to the application, not the detailed **program steps**. ... Builders Inc., is a **database** management system ... Mean Standard Test N Ratio **Deviation** t-value ...

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Method and system for the verification of handwritten signatures - all 2 versions »

CPK Smithies, JM Newman - US Patent 5,647,017, 1997 - Google Patents

... The system includes a **database** of signature templates storing verified signature information. ... Signature Verification Service Signatory **Database** 12 FIG. 1 ...

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Document and signature verification system and method - all 2 versions »

CPK Smithies, JM Newman - US Patent 5,818,955, 1998 - Google Patents

... The system includes a **database** of signature templates storing verified signature information. ... Signature Verification Service -<-> Signatory **Database** 12 Page 4. ...

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[book] Reporting Computational Experiments with Parallel Algorithms: Issues, Measures, and Experts' ...

RS Barr, BL Hickman - 1992 - faculty.smu.edu

... thrills" have been achieved by some applications, such as **database** transaction proc- ... instructions carried out by a computer (that is, **program steps**), while a ...

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Database

M Swindells, J Thornton, D Jones - 2003 - freepatentsonline.com

... These probabilities may be calculated from a non-redundant **database** of 270,000 ...
Thresholds that represent distances of Standard **Deviation** values from the mean ...

[Cached](#) - [Web Search](#)

Method of evolving classifier programs for signal processing and control - all 4 versions »

KA Farry, JJ Fernandez, JS Graham - US Patent 6,272,479, 2001 - Google Patents

... ADD RESOLVED SIGNAL DATA TO TRAINING **DATABASE** RESOLVE
UNRECOGNIZED SOW..

EVENT DATA ... 1080 1070 CLASSIFICATION TO TRAINING **DATABASE** ...

[Cited by 11](#) - [Related Articles](#) - [Web Search](#)

Q-fit: A probabilistic method for docking molecular fragments by sampling low energy conformational ... - all 4 versions »

RM Jackson - Journal of Computer-Aided Molecular Design, 2002 - Springer

... The protein-ligand coordinate files were taken from the PDB **database** [20] for ... There
are three distinct **program steps**: (1) Generation of hy- drogen atoms and ...

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... The system includes a **database** of signature templates storing verified signature information. ... 1 1.0 Signature Verification Service Signatory **Database** 12 Page 4. ...
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... There are three classes of **program steps**: serial operations which ... retrieval take time proportional to **database** size and ... and we can safely ignore the **deviation**. ...
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Page 1. US006477520B1 (12) United States Patent Malaviya et al. (54) ADAPTIVE TRAVEL PURCHASING OPTIMIZATION SYSTEM (75) Inventors ...
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G Der, B Everitt - 2002 - books.google.com
... 1.3.2 **Program Steps** ... The files produced by **database** programs, spreadsheets, and word processors are not normally "raw" data, although such programs usually have ...
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I Martin-Landa, F Pablos, IL Marr, JS Lancaster, ... - Analytical Proceedings, 1989 - xlink.rsc.org
Page 1. 16 ANALYTICAL PROCEEDINGS. JANUARY 1989. VOL 26 Determination of Organotins in Fish and Sediments by Gas Chromatography with Flame Photometric Detection ...
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... The ings contributing no useful information regarding the scene C-code **program steps** which perform the extraction are immediately surrounding the
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Method and system for interactive manufacturing, assembly and testing

RW Flesher - 2003 - freepatentsonline.com

... The undetected or inadvertent **deviation** from established standard ... As the **program steps** through each step of the ... each measurement may be logged into a **database**. ...

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Event feedback for numerically controlled machine tool and network implementation thereof - all 2 versions »

CS Hutchins - US Patent 5,291,416, 1994 - Google Patents

... These events are of two types: those embedded in the machine tool part pro -gram, which may be ordinary **program steps** or special event markers; and those which ...

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... VIDEO CAMERA VIDEO DATABASE TRACKING DATABASE TO POSITIONAL DATABASE CONVERSION

PROGRAM (FIG. 10) x PC 323 310 POSITIONAL DATABASE MOVIE MAPPER PROGRAM 325 ...

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... descriptions. Oracle is the relational **database** used for bulk architecture data storage, and DOORS is the re- quirements management tool. ...

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R Vincent - US Patent 6,195,122, 2001 - Google Patents

... The video images are later stored within a computer's **database** along with data denning the position and the orientation of the camera, and the distance to the ...

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... **Steps** in the traditional procedures were evaluated with regard to cost, time required, and value ... is 0.39 ft, the mean is 0.87 ft, the standard **deviation** is 3.5 ...

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[Vertical interval test signal for detecting video system low-level luminance linearity and ... - all 3 versions »](#)

T Holman, D Schnuelle - US Patent 5,353,117, 1994 - Google Patents

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SYSTEM AND METHOD FOR COMPUTER-BASED MARKETING

DR GREENING, JB HEY - 2001 - freepatentsonline.com

... of claim 13, wherein computer **program steps** for performing ... known methods, such as a **database** select operation ... a confidence level or standard **deviation** with each ...

[Cached](#) - [Web Search](#)

A DIRECT-SEARCHER Automatic System (Version 4) Running on Windows

Personal Computers - all 3 versions »

S Okada, K Okada - Z. Kristallogr, 2000 - ingentaconnect.com

... To use more accurate data, the standard **deviation** $s(I_o(h))$ of each reflection should be satisfied $I_1s(I_o(h))$ for PSL and $I_3s(I_o(h))$ for SEARCHER. ...

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... It shows that the 7 **program steps** are carried out in ... proton SEE tests published in the **database** of Jet ... the 4 tested channels showed a standard **deviation** of 4.3 ...

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Patent May

30, 1989 Sheet 10 of 20 4,835,699 CENTRAL CONTROLLER LOOM **DATABASE** FIG 8 (A) ...

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... the order does matter, even if there are no dependencies in these two **program steps**. ... an example of such a QA we will take Grover's **database** search algorithm ...

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[Financial transfer simulation system and method](#)

RT Yeh, CFX Kenney - 2003 - freepatentsonline.com

... In a simulation result **database**, there is a table for ... menu option is selected, the Simulator **program steps** forward to ... a mean of 3 and a standard **deviation** of 1 ...

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P Kamasa, M Pyda, A Buzin, B Wunderlich - Thermochimica Acta, 2003 - Elsevier

... method and a table of the 14 **program steps** for the ... r c . (c) Values of the standard **deviation**, SD, from a ... For values see the downloadable **database** on the WWW ...

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... factors within RUSLE, the C factor is based on the concept of **deviation** from a ... RUSLE uses a CROP **database** to store the values required to calculate the impact ...

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... Computer **Program Steps** ofmethod ofFigure 10 Computer Program Rule Based System **Database**

Media (Hard Disk) Media (Hard Disk) Products A- /x ^ Figure 11 ...

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... 10 is a specified flowchart illustrating **program steps** to partially deflate the

cardiac assist device during a patient monitoring procedure. ...

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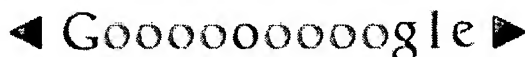
... Can fitQ ^ loQse seam shown fn FIQ 15 seam data for each can is stored in a **database** along with an indication of any threshold values that are crossed. Crossing ...

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WL Patterson, SPACE AND NAVAL WARFARE SYSTEMS ... - 2001 - nosc.mil

... **Steps** Comments 1 Start AREPS by double clicking the AREPS icon or by clicking the ...

3 If running AREPS for the first time, populate your EM system **database**. ...

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... of that execution upon completion of the **program steps**. ... files, movie files, or **database**

search engines ... therefore nonordinary, a conscious **deviation** from the ...

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... the BLAST function of the National Center for Biotechnology Information **database** may be used to ... As used herein, RMSD refers to root mean-squared **deviation**. ...

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... stores only selected ones of the image data strips representing substan - tially spaced apart successive locations along the route, for use as a sparse **database** ...

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